

“There’s only one pot of money it can come from”: A Corpus-Based Analysis of the International Baccalaureate in Canada’s Provinces

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Abstract

This study has a dual purpose: (1) to show how computer-assisted discourse analysis of a 1.5-million-word specialized corpus can uncover patterns of language use that provide insights into the beliefs and values of a particular social group, making possible a “new way of looking at old puzzles” (Stubbs, 2010); and (2) to examine how the International Baccalaureate (IB) is represented in the Canadian provincial context. Although key-words reveal lexical differences in how the IB is represented in each province, in-depth contextual analysis indicates a similarity of concerns, particularly with regard to funding and cost of IB programs.

Keywords: International Baccalaureate, corpus linguistics, discourse analysis, keyword analysis, education funding, policy, media

Résumé

Cette étude a un double objectif : (1) montrer comment l'analyse linguistique assistée par ordinateur d'un corpus spécialisé de 1,5 million de mots peut révéler des schémas d'utilisation de la langue permettant de mieux comprendre les croyances et les attitudes d'un groupe social donné, permettant ainsi une « nouvelle façon de regarder de vieilles énigmes » (Stubbs, 2010) ; et (2) examiner la manière dont le Baccalauréat International (IB) est représenté dans le contexte provincial canadien. Bien que les mots-clés révèlent des différences lexicales dans la manière dont l'IB est représenté dans chaque province, une analyse contextuelle approfondie révèle une similitude des préoccupations, notamment en ce qui concerne le financement et le coût des programmes de l'IB.

Mots-clés : Baccalauréat International, linguistique des corpus, analyse du discours, analyse des mots-clés, financement de l'éducation, politique, médias

Introduction

The International Baccalaureate (IB) is a series of educational programs for students aged 3 to 19 offered in schools around the world. It was originally created as a two-year high school diploma for a mobile population in need of a portable and recognized curriculum. In 2018, the IB organization celebrated its 50-year anniversary with a widely publicized commemorative book that documented its history, from inception in seven schools, to its present-day global network of almost 5,000 schools across 153 different countries (IBO, 2017). In a 2019 interview, the Director General of the IB organization claimed that an IB education is unique because

the IB is a 4.0 education in a 1.0 world... The IB prepares the students to be the creators of the algorithm rather than the consumers of the algorithm, so not be subjects without thinking...research has shown that IB students feel better prepared in their first year at university, compared to students without an IB background. (IBO, 2019b, para. 02)

Such comparative statements between the IB and other education systems are widely repeated on websites and social media platforms connected to the IB organization, constructing and perpetuating an image of the IB as not only different from, but better than, any other system of education. In addition, with headquarters in Geneva and regional offices in The Hague, Singapore, and the United States, the IB organization is typically described in terms of its global reach and international mission, more humanitarian than business (Fitzgerald, 2017a). This emphasis on the IB's global influence masks the fact that almost half of all IB schools worldwide (48%) are in the United States and Canada. This "hugely disproportionate" North American presence (Bunnell, 2011a, p. 69) tends to get hidden in standard descriptions of the IB.

The increasing popularity of the IB in Canada appears to have been accompanied by a corresponding devaluation of the local provincial curriculum alongside which it is offered (Doherty et al., 2012; Fitzgerald 2017b, 2018; Resnik, 2012; Steiner-Khamsi, 2018). For example, the IB organization website states quite explicitly that IB programs provide "unique academic rigour" and "aim to do more than other curricula" (IBO, 2019a). In the Canadian context, praise for IB programs positioning it as superior to the

provincial curriculum is easily found on websites of schools and universities. A typical example comes from one publicly funded school in Ottawa:

Recognized around the world and offered at more than 3000 schools internationally, the IBDP [Diploma Program] has at its core the education of the whole student, challenging them to expand their horizons in the classroom, in their community, and the world... In recognition of the level of study demanded by the IBDP and the quality of the graduates that it turns out, universities will often grant advanced standing or university credit to students who have achieved the IB Diploma. All successful recipients of the IB Diploma also receive their Ontario Secondary School Diploma. (<http://www.colonelby.com/IB.html>)

Descriptions of the IB tend to follow this general pattern, the main difference being the provincial credential given along with the IB, almost as an afterthought. However, such comparisons are not always explicit and the merits of the IB are often assumed or implied. As noted by a number of researchers, knowledge about the IB remains vague and superficial, relying predominantly on information produced by the IB organization itself or by affiliates such as regional associations and practitioners (Bunnell, 2011b; Doherty & Shield, 2012; Fitzgerald, 2015, 2017b; Tarc & Beatty, 2012). The resulting impact of this perception of IB superiority on public education is little understood.

One aim of this study is to examine how language and communication about the IB on the one hand reflect and shape public opinion and, on the other, impact public education. This is particularly important in the Canadian context, where education systems are the mandate of provincial and territorial governments, meaning that introduction of IB programs into publicly funded schools requires some type of agreement or permission from provincial ministries of education. Given that the IB is offered using public money, at the expense of other programs, there is surprisingly little research comparing the IB across provinces. Studies generally focus on individual provinces (e.g., Baker, 2014; Tarc & Beatty, 2012, in Ontario; Leggett, 2017, in British Columbia; DiGiorgio, 2010, in Prince Edward Island) or, as in Resnik's (2018) study, on the three provinces with the most IB schools (British Columbia, Ontario, and Quebec). Nor is there much, if any, focus on costs and funding, either in the IB literature in general, or in Canada in particular. The present study seeks to address this gap by comparing representations of the IB in all 10 provinces, to gain insight into the provincial variation in IB uptake. The first

study of its kind, it sheds new light on local decision making about how and why the IB is adopted.

This article is part of a larger study combining corpus linguistics and critical discourse analysis (CDA) (e.g., Baker et al., 2008; Potts, 2015; Vessey, 2017) to examine how the IB is discursively constructed in the Canadian context. Through the analysis of “real life language use” (McEnery & Wilson, 2001, p. 1), the aim is to make transparent the way values and attitudes associated with the IB have real world consequences for local (in Canada, provincial) education systems. A 1.5 million plus word specialized corpus of Canadian newspapers was used as an unsolicited window into public opinion (Karim, 2008; Mautner, 2008), to examine how multiple voices and perspectives bring to light the discursive construction of the IB in relation to public education, and the differences in policy making that privilege the former and thus negatively affect the latter (Fee, 2005), with the scale of the dataset playing a critical role in the investigation. Importantly, the corpus included not just powerful elite sources, but letters and opinion pieces from different members of the public in an effort to be maximally representative. The unsolicited nature of the data provided an important contrast to interviews and surveys that dominate IB research. In addition, the size of the dataset provided a different perspective from the more usual small-scale studies that focus on individual provinces or schools. The data-driven analysis also allowed a level of objectivity, as the researcher was directed by the data and had to account for both dominant as well as minority patterns.

The article is divided into the following sections. First, I present a brief chronological description of the IB in Canada’s 10 provinces together with a review of existing research on the topic. Second, I discuss the increasing use of corpus approaches to social science issues as a way to gain fresh insights into entrenched problems. Third, I describe the data, tools and methods used in the study. Finally, I discuss the findings and offer some concluding remarks.

Overview of the IB in the Provinces

Although Canada has the second-highest number of IB schools in the world, with the number continuing to grow (386 to date), research on the IB in Canada is relatively minimal and is mostly restricted to individual provinces or schools. As discussed elsewhere

(Fitzgerald, 2017b), there are conflicting accounts in the literature regarding reasons for adoption of the IB in Canada. One dominant view is that the IB addresses a perceived deficit in the provincial curriculum (e.g., Baker, 2014). Despite such views of IB superiority, particularly in relation to local provincial education, Canada regularly scores high on international rankings (e.g., PISA [Programme for International Student Assessment]) and was recently dubbed “an education superpower” (Coughlan, 2017).

More interesting, however, is that provincial curricula are exported internationally, thereby allowing students to obtain Canadian high school diplomas in other countries. These are accredited by the provincial ministries of education and are extolled for the same types of qualities typically attributed to the IB and perceived to be lacking in the provincial curriculum. For example, in Italy, Ontario’s curriculum is described as an “academically rigorous high school curriculum under the supervision of the Ontario Ministry of Education,”¹ and in Egypt, as a “student-centred approach” that “helps all learners develop the knowledge, skills and perspectives they need to become informed, productive, caring, responsible, healthy, and active citizens in their own communities and in the world.”² British Columbia’s curriculum in Egypt is presented as having “been ranked as one of the top education systems internationally” with “BC students continually rank[ing] among the top in the world.”³ In the United Arab Emirates, Alberta’s curriculum is an “internationally recognized diploma” that “permits students’ entry into university programs throughout North America and the world,”⁴ while Nova Scotia’s “afford[s] students the opportunity to enter post secondary studies at prestigious universities and colleges anywhere in the world.”⁵ It thus seems that within Canada, the IB is perceived as being better than provincial curricula, but outside Canada, they are more equally perceived.

Table 1 presents a chronological snapshot of IB schools by province, showing that at first, the rate of IB adoption in the different provinces is steady, occurring within three years of each other, from British Columbia in 1974 to New Brunswick in 1984. Eight provinces signed on to make IB programs part of their provincial curricular offerings over

1 <https://www.canadiancollegeitaly.com/academics/our-approach>

2 <http://cise-egypt.com/academics/the-ontario-curriculum/>

3 <https://bccis.ca/about-us/>

4 <http://cisabudhabi.com/curriculum/alberta-education/>

5 <http://www.agsgrmmr.sch.ae/curriculum.html>

a 10-year period. The last two provinces to introduce the IB, almost a decade apart, are also the smallest in terms of population.

Table 1. IB schools in each province (as of May 10, 2019)

Province	Year introduced	Total number	Number publicly funded
British Columbia	1974	50	33
Ontario	1975	113	86
Alberta	1978	41	39
Manitoba	1980	7	6
Nova Scotia	1980	15	13
Quebec	1982	146	122
Saskatchewan	1984	4	3
New Brunswick	1984	4	3
Newfoundland	2000	2	1
Prince Edward Island	2009	2	2

Quebec has the highest number of publicly funded IB schools, followed by Ontario and British Columbia. Only two IB schools in Alberta and Nova Scotia are private, whereas none in Prince Edward Island are. Nova Scotia fully funds the program as part of its public education responsibility, whereas one school board in Saskatchewan recently cancelled its IB program after 30 years due to high cost. Such variations within Canada suggest further avenues for inquiry into the relation between the IB and provincial curricula as to what these differences are, how they are manifested, who the actors involved are, and how decisions are arrived at. One way to gain insight into specific social and discursive contexts is by looking at computer-generated lists of statistically significant keywords that highlight salient themes in a large corpus.

Prior Research on Corpus-Based Discourse Analysis

Studies combining corpus linguistics with (critical) discourse analysis have been used to examine a wide range of social issues and policy topics over the past decade, such as French and English in Canada (Vessey, 2013), transgender identity (Zottola, 2018), gender representation in sports (Aull & Brown, 2013), end of life care (Potts & Semino,

2017), hate speech and social media (Hardaker & McGlashan, 2016), global financial issues (Lischinsky, 2011), media discourse (Brindle, 2016), climate change (Willis, 2017), and piracy (Germond et al., 2016). The power of this approach is that it makes it possible for the researcher to analyze large volumes of real language used in a given society, which helps make visible the aspects of social institutions that have come to be taken for granted (or naturalized) over time (Baker, Brezina, & McEnery, 2017; Baker, McEnery, & Hardie, 2017; McEnery & Baker, 2017; McEnery et al., 2013). The concept of frequency is fundamental to this approach and provides an empirical data-driven way to discover shared values and assumptions of a given society. A further important aspect is that naturally occurring data are observable and verifiable (McEnery & Wilson, 2001).

Specialized computer software tools directed the researcher to “discursive structures” (Mills, 2004) that emerged through recurring patterns of language, which would not otherwise be noticed in a small sample of texts. Keyword analysis was conducted using corpus tools, comparing different provincial sub-corpora to the corpus as a whole. Keywords form an important part of corpus linguistic research, and in the present study helped to identify the different preoccupations or discourses surrounding the IB in each province, and the different roles the IB plays in furthering particular agendas.

Analytical Framework: Keywords and Keyness

In much corpus linguistics research, a keyword is any word that occurs “with unusual frequency” (Scott, 1997, p. 236) in one corpus when compared to another (reference) corpus using specialized computer software tools and large volumes of linguistic data. It is possible statistically to identify keywords and salient patterns, which then act as useful signposts for avenues of further inquiry. Keywords are determined by statistical methods (e.g., log-likelihood or chi-square) through which a “keyness” value is assigned to each word: the higher the keyness score, the stronger the “saliency” (Baker, 2006, p. 125). Keywords thus give an idea of the preoccupation or “aboutness” (Baker et al., 2006) of a corpus, and direct the researcher to specific aspects for further inquiry. They are generally of three types: (1) proper nouns (e.g., *Obama*, *Trudeau*); (2) lexical words (e.g., *baccalaureate*, *transgender*); and (3) grammatical words that may be an indication of style (e.g., *shall*, *because*) (Baker, 2004). Once keywords are obtained, they can be

qualitatively analyzed in their immediate textual contexts using different techniques, such as concordances (keyword in context displays), collocations (words that occur together), clusters (recurring fixed phrases), and in-depth analysis of whole texts in their wider social, political, and historical context.

The present study uses corpus tools to generate separate lists of keywords for each of Canada's 10 provinces to understand how the IB is discursively constructed in each province.⁶ The IB media corpus used in the present study is maximally representative (i.e., it includes all articles available through two databases at the time of the search as well as multiple voices and perspectives on the IB that reflect the diversity of participants that play a role in the formation of public policy) (Ball, 2008; Myers, 2004; Potts & Semino, 2017). Also important to note is that the articles include different segments of society, not just powerful elite sources or the IB organization itself.

Method

A specialized IB media corpus was created by obtaining articles through two online news databases, Canada Newsstand Complete and LexisNexis Academic, using the search terms *international AND baccalaureate, ib AND diploma OR student*. These search terms were based on prior knowledge and encounters with the topic. All Canadian newspapers (national, regional, local, and community, paid or free) were included to ensure maximum representation of public attitudes and perceptions, and to avoid the possibility of selection bias. Articles were downloaded and saved by individual province in 10 sub-corpora. After the data were cleaned, with repeated or erroneous articles removed, the final IB media corpus contained 2,326 articles between 1977 and 2016, from 108 newspapers across 10 provinces, with a total of 1,521,796 words.

The corpus tool used was AntConc (Anthony, 2014), a freeware corpus analysis toolkit that provides a number of ways in which corpus data can be sorted to make different patterns visible. For this study, AntConc's wordlist, keyword feature, and log-likelihood statistical test were used to generate a list of the top 100 keywords for each province. This was done by comparing each provincial sub-corpus to the remainder of

6 Canada's three territories, Nunavut, Yukon, and Northwest Territories, are not included in the present study as they do not currently offer any IB programs (see ibo.org).

the corpus, which thus acted as the reference corpus (Baker et al., 2013; Culpeper, 2009; McEnery, 2016). Once a keyword list for a province was obtained, individual keywords were examined in context, first using AntConc's concordance and cluster features and then reading entire articles where necessary to understand fully how the word was being used.

For purposes of the analysis, proper nouns such as names of people, places, schools, and teams were excluded unless they were found to be directly relevant to IB discourse. The top 100 lexical keywords obtained for each provincial sub-corpus were analyzed and grouped according to shared semantic fields indexing similar topics, such as "school-board related" or "IB organization-related," based on their meaning in context. Although this type of grouping tends to be subjective (e.g., Marchi & Taylor, 2009), it helps to draw out trends and patterns that may not be seen at the individual word level. Using this procedure, keywords were obtained that were unique to each province, which then allowed for the identification of patterns of language use that shed light on the particular way each province constructs the IB. Since the focus of the study is to understand whether and how different provinces construct the IB in *different* ways, and shed potential light on reasons for adoption, attention was paid to unique keywords (Baker et al., 2013).

The keywords for each province were grouped into eight broad categories: (1) school board-related; (2) IB organization-related; (3) university-related; (4) types of programs/schools; (5) United World College-related;⁷ (6) individual stories/anecdotes; (7) sports; and (8) other. Occasionally a keyword could belong in more than one category, for example "school board-related" and "types of programs/schools." In such cases, it was included in the category where it occurred most frequently. Due to space constraints, it is not possible to present all 100 keywords for each province grouped into their respective categories, nor the analysis that was conducted for each keyword. For the purposes of illustration, the grouped keywords from the British Columbia sub-corpus (the first province to offer an IB program) are presented below (see Table 2). For other provinces, only the largest group of unique keywords is reported, organized in order of keyness strength, followed by the types of discourses they revealed, whether dominant or minority. Keywords

7 United World Colleges (UWC) comprises 18 schools in different parts of the world. The Lester B. Pearson United World College of the Pacific, located in Victoria, BC, was established in 1974 and was the second UWC and the first IB school in Canada. The IBO is listed as one of its partners and the IB curriculum is offered at all UWC schools (www.uwc.org).

were further qualitatively analyzed in terms of their wider social, political, and historical context, a necessary part of corpus-based CDA studies, but which can only be touched on in this article due to space constraints.

Findings

British Columbia

The British Columbia sub-corpus (367,048 words) consists of 606 articles from 48 community-based newspapers. As a result, news coverage in this province tends to focus on particular geographical areas. The largest group of lexical keywords (30) found for British Columbia related to school boards (Table 2).

Table 2. British Columbia sub-corpus top 100 keywords grouped according to semantic fields

Semantic fields	Keywords
School board-related	<i>district, districts, catchment, ministry, sd, declining, union, trustees, trustee, advisory, contractual, labour, enrolment, closure, bargaining, spaces, superintendent, supt, chair, legislation, portables, conflict, cancel, training, liberals, facilities, dispute, plan, motion, parking</i>
IB-related	<i>ib, middle, program, primary, programme, school, cohort, programmes, program, meeting, global, community, candidate, accredited, approved, selective, international</i>
University-related	<i>ubc, sfu, uvic, exemptions</i>
Types of programs/schools	<i>trades, montessori, choice, independent, immersion, academies, side, traditional, esl, technology, marine</i>
United World College-related	<i>pearson, pacific, college, uwc, victoria</i>

Semantic fields	Keywords
Individual stories/anecdotes	<i>said, according, muslim, info, we, portfolio, neighbourhood, grades, wife, operator, passed, loving</i>
Sports	<i>outdoor, sailing</i>
Other (mentioned in passing or unrelated)	<i>grandchildren, assisted, muslims, peacefully, landmines, murder, undercover, killing, lawyers, realty, mounties, federation, land, property, asian, carbon, flowers, bones, seismic</i>

In-depth analysis of school board-related keywords revealed discourses such as the high demand for IB programs, additional costs associated with offering the programs, labour disputes with teachers' unions, and declining enrolment in schools. For example, analysis of the top keyword district revealed a number of issues that involved the local school board (see Concordance 1).

Concordance 1: keyword *district*

demand for the IB program throughout the school	<i>district</i>	according to Jefferson. Capilano elementary
While some costs are covered by the school	<i>district</i>	additional costs for students over their thr
were embroiled in a dispute between the school	<i>district</i>	and teachers' union over contractual conc
by the two-year diploma program. And the school	<i>district</i>	has already paid \$11,000 to register for the
said declining enrolment in the school	<i>district</i>	made it difficult to justify the capital spend

Expanded concordance lines and full articles provided further insights into the specific kinds of issues that were associated with the IB, such as budgets and cost, as shown in the following excerpt for the top keyword *district*:

(1) A [school] International Baccalaureate program will only succeed by **taking funding away from students and programs at other schools**, the local teachers' union alleged Tuesday. It also flies in the face of teachers' contractual concerns regarding class size, teacher placement and training requirements, said union

president [name]. “We see it as money that’s going into a program that **benefits a few at the cost of others**,” he said. “There’s only one pot of money it can come from.”

In sum, the BC sub-corpus shows the IB in a context of financial concerns, declining school enrolment, school closures and labour disputes.

Ontario

The Ontario sub-corpus (548,384 words) has a large number of community newspapers, and also has national newspapers such as *The Globe & Mail*. This sub-corpus consists of 781 articles from 40 newspapers. As with British Columbia, the largest group of lexical keywords (37) also related to school boards (Table 3).

Table 3. Largest keyword group for Ontario sub-corpus: School board

*board, region, trustees, upper, trustee, tdsb, boards, private, **magnet**, tier, **fees**, income, zone, ward, specialized, platform, occupation, transfers, transfer, wards, area, equity, cuts, obe, review, ocdsb, million, rainbow, budget, adsb, costs, reserves, money, transportation, councils, committee, generated*

The keyword *magnet* was found only in the Ontario sub-corpus. Analysis in context revealed discourses related to (declining) school enrolment and the issue of user fees for IB programs (see Concordance 2):

Concordance 2: keyword *magnet*

could affect enrolment in some Hamilton high schools. The	<i>magnet</i>	concept has generated excitement. At the same time
gifted students, but the IB at [school A] is proving to be a	<i>magnet</i>	[School B] has already lost close to 40 students to [School A].
fees to be charged to students in the International Baccalaureate	<i>magnet</i>	program at [school] in Kitchener.
principal of Secondary School, fears	<i>magnet</i>	programs could have a serious effect on enrolment at some schools, an

Further analysis of expanded concordance lines and full articles showed the IB in connection with financial implications for school boards, parents, and taxpayers, as can be seen in the following excerpt for the keyword *fees*:

(2) [Name], the school's principal, said this is the responsible way of managing program costs. **"It's not fair to ask taxpayers fully funding our Ontario curriculum to also be paying for this additional IB program,"** he said. "These fees we are charging are simply cost-recovery fees. If we charged nothing, **the money would have to be taken from somewhere else** in our budget." When schools do charge, however, **parents often aren't told what they're paying for**. Application fees, annual charges or exam fees are sometimes cited, as are annual licensing fees and professional development.

In sum, the Ontario sub-corpus shows the IB in contexts of budgetary concerns and costs of running the program, issues of equity and access, and as a magnet program introduced to boost student enrolment.

Alberta

Unlike British Columbia and Ontario, the Alberta sub-corpus (311,480 words) does not have a large number of community newspapers, consisting of 516 articles from four newspapers. Of the top 100, the largest group of lexical keywords (18) related to stories about individuals (Table 4).

Table 4. Largest keyword group for Alberta sub-corpus: Individual stories

<i>says, i, you, she, old, her, my, me, kids, father, they, girl, kid, girls, him, it, boy, his</i>

Further analysis of the top keyword *says* revealed that the most frequent usage was the two-word cluster *she says* followed by *he says*, which related to stories about individuals enrolled in, or personal opinions about, IB programs. The next most frequent two-word cluster was *board says*, which revealed discourses related to budgets, funding, class size, and school choice (see Concordance 3).

Concordance 3: keyword *says*

chairman of the Edmonton public school	<i>board says</i>	despite challenges caused by a budget shortfall, the district is work
are still determined to keep class sizes down, the chairman of the public school	<i>board says</i>	"I'm surprised at classes of 40," chairman [] said Wednesday

no longer appropriate in today's rapidly evolving society," the school	<i>board says</i>	in its philosophy statement. " Choice is the foundation of our district's approach
will cost city's public board \$3 million The Edmonton public school	<i>board says</i>	it may stand to lose as much as \$3 million in high school funding next year

Thus, although anecdotes and passing mention of the IB formed the dominant discourse in this sub-corpus, where the IB was mentioned as part of the individual's resume for example, the top keyword also revealed a minority discourse in the sub-corpus that might have been missed in a smaller sample. In sum, the Alberta sub-corpus primarily locates the IB in contexts of personal experience stories or anecdotes about individuals who are enrolled in the program, with some references to school board-related discourses.

Manitoba

The Manitoba sub-corpus (10,032 words) is small compared to the previous three, containing 20 articles from two newspapers. Despite its size, there are still enough keywords to give us an indication of some preoccupations around the IB in this province. As with British Columbia and Ontario, the largest group of keywords (25) is related to school boards (Table 5).

Table 5. Largest keyword group for Manitoba sub-corpus: School board

<i>bsd, division, chamber, increase, taxpayers, tax, levy, elitist, millions, afforded, budget, taxes, dollars, majority, hike, outrage, trustees, properties, magnitude, wasting, manager, supt, owners, failed, blames</i>

The presence of three tax-related keywords (taxpayer, tax, taxes) indicated this to be a dominant discourse. Examining keywords in context revealed a pattern around taxpayers paying for the IB in public schools (see Concordance 4):

Concordance 4: keyword *taxpayers*

To date, I'm not sure if Brandon has had even one. In return, Brandon	<i>taxpayers</i>	are saddled with a program that costs millions of dollars a year to maintain
in the province with a budget that exceeds \$49 million, it seems to me	<i>taxpayers</i>	get extremely good value for much less than the price of a sneeze in a cat farm.
says such a substantial increase is too much for most	<i>taxpayers</i>	in times of economic uncertainty, especially business owners. "Business

it was worth the extra cost to the Brandon School Division and local	<i>taxpayers</i>	The initial cost to create the program was roughly \$18,000, according
look at how their continued spending increases are crippling the city's	<i>taxpayers</i>	Trustees have tentatively approved a 9.1 per cent special levy increase

Expanded concordances and full articles revealed a series of letters to the editor that documented a debate between people who accused the local school board of wasting money on “frivolities” like the IB program and those who believed that it is the “crown jewel of our school division’s academic offerings.”

Nova Scotia

The Nova Scotia sub-corpus (21,135 words) consists of 47 articles from three newspapers. As with British Columbia, Ontario, and Manitoba, the largest group of keywords (31) relate to school boards (Table 6).

Table 6. Largest keyword group for Nova Scotia sub-corpus: School board

<i>province, million, billion, department, expenditures, surplus, budget, tories, initiatives, board, debt, recommendations, cap, equalization, departments, net, tax, funding, session, consultants, clawback, fuelling, promises, capping, baccalaureate, spend, dollars, provincial, injected, tab, capita</i>
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Analysis of keywords suggested that the preoccupation in this province was about cost, budgets, and provincial (political) issues relating to the IB. One surprising keyword given the nature of this specialized corpus was *baccalaureate*, found only in this province in connection with cost and expansion of the program (see Concordance 5).

Concordance 5: keyword *baccalaureate*

She said families are attracted to the International	<i>baccalaureate</i>	diploma program, which the province is rolling out in 10 schools
add eight new high schools to the list of those offering the International	<i>baccalaureate</i>	program, a \$125,000 promise. It’s also phasing in a tax credit for
for that hands-on experience.” He said the Tories will expand the International	<i>baccalaureate</i>	program for gifted students, expand English programs for immigrant students
High School in Dartmouth \$20,000 to help it set up an International	<i>baccalaureate</i>	program. Marshall said the board did the best it could with the money allotted

For gifted students, the province will spend \$225,000 to set up International	<i>baccalaureate</i>	programs at 11 schools, including four Halifax Regional School
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Nova Scotia is the only province that offers the IB at no cost to students as part of its provincial educational offerings, yet the issue of cost came up in a number of different ways, such as the need to *cap* class size.

Quebec

The Quebec sub-corpus (98,546 words) consists of 121 articles from one English-language newspaper, the *Montreal Gazette*, the only result from the online search. French newspapers were not included in this study. Many of the articles were of the “What’s On” genre, where the IB was mentioned in passing as part of a schedule of events. For example, an announcement about a Christmas craft bazaar with bake sales and raffle draws preceded a notice about an upcoming IB exam, registration, and parent/teacher interviews. As such, the largest group of lexical keywords in this sub-corpus (45) related to “Other” (e.g., *christmas, bazaar, raffle, craft, halloween, pizza*), which placed the IB in a context of one among many scheduled events. The second largest group of lexical keywords (15) related to school boards (Table 7).

Table 7. Second largest keyword group for Quebec sub-corpus: School board

<i>elementary, emsb, commissioners, english, governing, open, house, chairperson, ppo, registration, capacity, hearings, voted, enrolment, lbpsb</i>
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Further analysis of the top keyword *elementary* revealed patterns of discourse around declining enrolment, school closure, and labour disputes (see Concordance 6).

Concordance 6: keyword *elementary*

because of declining enrolment . The EMSB has 20,063 students in its	<i>elementary</i>	and high schools, down from 27,098 in 2002. It had more than 11,800 surplus pupil places
down from 27,098 in 2002. It had more than 11,800 surplus pupil places in its	<i>elementary</i>	and high schools as of September 2010, according to the board’s long-range planning
a high school in Côte St. Luc in 2013. The EMSB’s enrolment in its	<i>elementary</i>	and high schools has shrunk to about 20,000 students from 27,000 in 2002

committee notes the board has a surplus of 8,000 pupil places at the	<i>elementary</i>	level. In its proposal to close Carlyle and redirect the students to Coronation
Teachers say program is being forced on them; International Baccalaureate;	<i>elementary</i>	school's union is opposed but parents overwhelmingly support it Teachers at a

In addition, the keyword *ppo* (Parent Participation Organization) provided some evidence of parent involvement in schools.

Saskatchewan

The Saskatchewan sub-corpus (54,569 words) consists of 79 articles from four newspapers, many of which were about individual stories or community events that only mentioned the IB in passing. The largest group of keywords (16) was related to sports (e.g., *speedskating, basketball, tournament, league, gallop, sled*), where the IB was mentioned as part of an athlete's list of achievements. The second largest group of keywords (15) related to "Other" (*hiv, smoking, aids, lung, crusade, pacemaker*) and resulted from lengthy articles about a volunteer in Uganda and an anti-smoking campaign that mentioned the IB in connection with the people involved. Thus, in this sub-corpus, the IB is typically represented as a kind of achievement or accomplishment that forms part of an individual's summary of qualifications. However, the third largest group (10) of lexical keywords related to school boards (Table 8).

Table 8. Third largest keyword group for Saskatchewan sub-corpus: School board

<i>division, divisions, employers, gdp, percentage, shrc, shortage, growth, welcoming, welcomed</i>

Further analysis of the top keyword *division* revealed discourses around budgets and the cost of running IB programs. Most notable was reference to the decision by a school board in Regina to stop offering IB programs in its schools after more than 30 years, due to the high cost of the program, as can be seen in the following excerpt of an expanded concordance line:

(3) After more than 30 years, Regina Public Schools has decided to stop offering IB—a program promoted as being “academically challenging and balanced”—citing **high costs** and low enrolment as part of the reason for the decision...a

program review and implementation plan conducted by the division found that only eight students had pre-registered for the program... The **cost** on the division, throughout the system, of offering IB worked out to nearly **\$10,000 per student**.

In sum, while the dominant representation of the IB in this sub-corpus does not focus on the program per se, a minority discourse surrounding operational costs is present.

New Brunswick

The New Brunswick sub-corpus (95,223 words) consists of 127 articles from three newspapers. Similar to the Quebec sub-corpus, New Brunswick has a large number of “What’s On” community announcements where the IB is mentioned alongside other items, and the largest group of lexical keywords (78) also related to “other” (e.g., *gallery*, *theatre*, *art*, *exhibits*, *exhibition*). Further examination of the keywords showed that in this province, art exhibitions and musical performances dominated. For example, a list of community events such as theatre performances and musical concerts also mentioned IB student exhibitions. The second largest group of keywords (14) related to stories about individuals where the IB formed part of their list of achievements. While the IB was predominantly mentioned in relation to cultural performances, a minority discourse around the issue of funding and fairness in connection to the IB was discovered through the school board-related keyword *pac* (Parent Advisory Council), which was part of the next largest group (Table 9).

Table 9. Third largest keyword group for New Brunswick sub-corpus: School board

<i>pac</i> , <i>department</i> , <i>resignation</i>

Expanded concordance lines showed reference to an “IB controversy,” a dispute between parents and school board officials about equal access to IB programs and pointed to parent involvement in school decision-making processes.

Newfoundland

The Newfoundland sub-corpus (8,934 words) is small and consists of 16 articles from two newspapers. A recurring promotional item for an IB school was found located in

close proximity to other news reports and, as such, the largest group of keywords (48) related to “Other” (e.g., *soldier, arabian, warm, taxi, ballot, race*). The second largest group of lexical keywords (13) related to the United World College (Table 10).

Table 10. Second largest keyword group for Newfoundland sub-corpus: United World College

<i>laureate, united, country, world, countries, colleges, chosen, received, awards, awarded, outstanding, selected, named</i>

Despite the small size of this sub-corpus, the appearance of keywords related to the UWC points to an unusually frequent link between the two. Dominant references related to students winning scholarships to complete the IB at UWCs around the world.

Prince Edward Island

The Prince Edward Island sub-corpus (6,445 words) is the smallest and consists of 13 articles from one newspaper, many of which were about students winning scholarships for the Pearson UWC in Victoria, BC. As such, like Newfoundland, the largest group of keywords (29) related to UWC (Table 11).

Table 11. Largest keyword group for Prince Edward Island sub-corpus: United World College

<i>pearson, pacific, college, lester, committee, scholarship, candidates, selection, shores, territory, ocean, minister, worthy, members, province, prestigious, deserving, exceptional, colleges, unique, excellent, delighted, exuberance, confident, ambassador, enthusiasm, tuition, prize, demanding</i>

Despite the small size of this sub-corpus, a strong link is evident between the IB and the UWC, where the IB is located in the context of a highly competitive scholarship.

Discussion

The purpose of this study was twofold: (1) to show how corpus-based methodologies, specifically keyword analysis, can be used to uncover patterns of language use that may

provide fresh insights into entrenched social issues; and (2) to discover how individual Canadian provinces compare in their perception of the IB and what impact this may have for local provincial education systems. To understand how provinces uniquely positioned the IB in their public discourse, linguistic patterns based on unusually frequent keywords found in a specialized IB media corpus were analyzed. This analysis was done by comparing each provincial sub-corpus to the remainder, in order to highlight how they differed from one another.

This focus on provincial comparison was considered an important yet missing aspect in IB research, which tends to be dominated by small-scale studies on individual schools or particular geographic areas. Without a large-scale systematic province-by-province comparison, there may be an assumption that the IB is perceived in the same way in all provinces and therefore research and findings about the IB from one province could be usefully applied to any of the others. As well, the larger study of which this is a part focused on the IB in Canada as a whole in an effort to understand how Canada compared to other countries. Dominant discourses emerging from that study presented the IB in a highly positive light, as world renowned and superior to all other curricula. However, that is only a partial picture, and a rather different one emerged when provinces were compared against one another, related to high cost and budgetary concerns that had not been evident previously.

The first pattern that emerged when the top 100 keywords from each province were grouped according to eight broad categories is one of similarities rather than differences. That is, even though the individual keywords such as *district*, *division*, and *board* were different, suggesting that provinces may position the IB very distinctly from one another, when examined in context they tended to relate to similar topics or themes. Of the 10 provinces, six (British Columbia, Ontario, Manitoba, Nova Scotia, Quebec, Saskatchewan) showed a preoccupation with school boards in relation to the IB, two (Newfoundland, Prince Edward Island) focused on the IB in relation to the UWC, one (Alberta) indicated a dominance of stories about individuals who are in some way connected to the IB, and one (New Brunswick) was dominated by passing references to the IB in the context of other events, namely cultural performances. The prevalence of school board-related keywords provides some evidence of where IB decision making may be located. Although education comes under the mandate of provincial ministries, the operational responsibilities are largely carried out by local school boards. In such contexts,

parents play key roles and influence local decision making with respect to adoption of IB programs. In other words, decisions about whether to offer IB programs appear to rest with local boards and not the ministries of education, and as such have led to a lack of standardization and a policy vacuum as each local school board or school operates according to different rules (Baluja & Hammer, 2012).

The second dominant pattern surrounding the IB had to do with issues such as provincial funding, cost of the IB program, school budgets, class sizes, teacher training, declining enrolment, and school closure. Although individual provinces varied in how these were framed, (e.g., labour disputes in British Columbia or budgetary concerns in Ontario), an underlying yet persistent discourse found throughout linked the IB to issues of cost. This preoccupation tends to be hidden in casual encounters with the topic. Typical descriptions of the IB are positive, presenting the same list of virtues of this brand of education, as previous studies have shown. Data-driven keyword analysis allows us to get at contexts and values that may not otherwise be visible. The frequency of school board-related keywords referring to costs and budgets places the IB in a different context than usual. Instead of repeated references to international recognition and preparing students for university, the IB is in a context of budgets and high cost, and also of decisions about IB uptake seeming to rest with school boards and parents rather than ministries of education. So, although the IB is framed in global and world peace-type rhetoric, in reality there seems to be a much more local notion of uptake, driven in part by parents on school boards, schools, and districts trying to attract students in order to survive.

Other patterns worth noting showed the IB as either mentioned in passing or as part of an anecdote or story about an individual. For example, Saskatchewan, New Brunswick, and Quebec were dominated by community news that placed the IB in the context of one among many events taking place. That is, the IB was not the focus of the article and thus could be seen unadorned, which also provides a different perspective. On the other hand, IB quality can be taken for granted, particularly in cases where references in passing indicate merit and esteem since they are often mentioned as part of a person's list of achievements. Notable in this group are the keywords relating to the UWC, which play an important and influential role in constructing the IB as being on a mission of peace around the world. The laudatory epithets used to describe the scholarships and the students who win them provide some indication as to how discourses can become entrenched through repetition and eventually come to be taken for granted.

Conclusion

The findings of this study are more suggestive than definitive, showing what is possible with this approach. Looking at real life language use on a large scale provides a window into how groups of people or institutions are constructed, and the social, cultural, and political representations, values, and opinions involved. A dominant discourse that emerges from the data is about the cost of the IB in public schools, which is significantly different from the dominant, *positive* discourse found at the national (Canada-wide) and international levels. Despite different keywords across provinces, they point to the same concerns, the most pressing being cost, and the very real consequence of having provincial funds diverted from public school curricula to fund resources needed for IB programs. This might suggest that even though the IB is typically constructed as a solution to local education problems, the IB may itself be a contributing “problem” (i.e., the IB is not being brought in to address a perceived deficit in the provincial curriculum, but rather the provincial curriculum is suffering scarcer resources as a result of IB incursion). As the IB organization celebrates its 50 years and expanding growth in Canada and the world, it is worth bearing in mind a lesser-known aspect of IB history as related by its founder, Alec Peterson:

...if IBO as a whole was to become financially viable...it must seek a swift and substantial increase in the number of IB schools, and that under current conditions such an increase could only be found in North America...There can be little doubt that without the 300% growth of North American IB schools between 1980 and 1985, a period when the number of IB schools in the rest of the world grew by approximately 33%, IBO as a whole might have foundered. (Peterson, 1987, p. 147)

References

- Anthony, L. (2014). *AntConc* (Version 3.4.3) [Computer Software]. Waseda University. <http://www.laurenceanthony.net/>
- Aull, L. L., & Brown, D. W. (2013). Fighting words: A corpus analysis of gender representations in sports reportage. *Corpora*, 8(1), 27–52.
- Baker, H., Brezina, V., & McEnery, T. (2017). Ireland in British parliamentary debates 1803-2005. In T. Säily, A. Nurmi, M. Palander-Collin, & A. Auer (Eds.), *Exploring future paths for historical sociolinguistics* (pp. 83–107). John Benjamins.
- Baker, H., McEnery, T., & Hardie, A. (2017). A corpus-based investigation into English representations of Turks and Ottomans in the early modern period. In M. Pace-Sigge & K. J. Patterson (Eds.), *Lexical priming: Applications and advances* (pp. 41–66). John Benjamins.
- Baker, P. (2004). Querying keywords: Questions of difference, frequency and sense in keywords analysis. *Journal of English Linguistics*, 32(4), 346–359.
- Baker, P. (2006). *Using corpora in discourse analysis*. Continuum.
- Baker, P., Gabrielatos, C., KhosraviNik, M., Krzyżanowski, M., McEnery, T., & Wodak, R. (2008). A useful methodological synergy? Combining critical discourse analysis and corpus linguistics to examine discourses of refugees and asylum seekers in the UK press. *Discourse & Society*, 19(3), 273–306
- Baker, P., Gabrielatos, C., & McEnery, T. (2013). *Discourse analysis and media attitudes: The representation of Islam in the British press*. Cambridge University Press.
- Baker, P., Hardie, A., & McEnery, T. (2006). *A glossary of corpus linguistics*. Edinburgh University Press.
- Baker, W. (2014). “Curricular choice” in Ontario public secondary schools: *Exploring the policy and practice of the International Baccalaureate Diploma Programme* [Unpublished master’s thesis]. University of Western Ontario.
- Ball, S. J. (2008). *The education debate*. Policy Press.

- Baluja, T., & Hammer, K. (2012, September 6). From \$3,000 to zero, fees vary wildly for prestigious high-school program. *The Globe and Mail*. <http://www.theglobeandmail.com/news/national/education/from-3000-to-zero-fees-vary-wildly-for-prestigious-high-school-program/article4255400/>
- Brindle, A. (2016). A corpus analysis of discursive constructions of the Sunflower Student Movement in the English-language Taiwanese press. *Discourse & Society*, 27(1), 3–19.
- Bunnell, T. (2011a). The International Baccalaureate in the United States: From relative inactivity to imbalance. *The Educational Forum*, 75, 66–79.
- Bunnell, T. (2011b). The International Baccalaureate: Its growth and complexity of challenges. In R. Bates (Ed.), *Schooling internationally: Globalisation, internationalisation and the future for international schools* (pp. 165–181). Routledge.
- Coughlan, S. (2017, August 2). *How Canada became an education superpower*. BBC News. <https://www.bbc.com/news/business-40708421>
- Culpeper, J. (2009). Words, parts-of-speech and semantic categories in the character talk of Shakespeare's Romeo and Juliet. *International Journal of Corpus Linguistics*, 14(1), 29–59.
- DiGiorgio, C. (2010). Choices of students, parents, and teachers and their effects on schools and communities: A case study of a new enriched high school program. *Journal of School Choice*, 4(3), 278–292.
- Doherty, C., Luke, A., Shield, P., & Hincksman, C. (2012). Choosing your niche: The social ecology of the International Baccalaureate Diploma in Australia. *International Studies in Sociology of Education*, 22(4), 311–332. <https://doi.org/10.1080/09620214.2012.745346>
- Doherty, C., & Shield, P. (2012). Teachers' work in curricular markets: Conditions of design and relations between the International Baccalaureate Diploma and the local curriculum. *Curriculum Inquiry*, 42(3), 414–441.

- Fee, M. (2005). *Corpus linguistics and cultural difference in Canada*. Oxford. <https://open.library.ubc.ca/cIRcle/collections/facultyresearchandpublications/52383/items/1.0074534>
- Fitzgerald, S. (2015). Perceptions of the International Baccalaureate (IB) in Ontario universities. *Canadian Journal of Education*, 38(3), 1–34.
- Fitzgerald, S. (2017a). Murderers, moonwalkers and markets: A corpus based critical discourse analysis of the International Baccalaureate (IB) in Canadian newspapers. *Critical Approaches to Discourse Analysis across Disciplines (CADAAD)*, 9(1), 1–26.
- Fitzgerald, S. (2017b). Perceptions of the International Baccalaureate (IB) in Canadian universities. *Canadian Journal of Higher Education*, 47(3), 76–100.
- Fitzgerald, S. (2018). When you're in with the in-crowd: The discursive construction of the International Baccalaureate (IB) in a corpus of Canadian newspapers. *Journal of Language and Discrimination*, 2(1), 58–84.
- Germond, B., McEnery, T., & Marchi, A. (2016). The EU's comprehensive approach as the dominant discourse: A corpus-linguistics analysis of the EU's counter-piracy narrative. *European Foreign Affairs Review*, 21(1), 135–154.
- Hardaker, C., & McGlashan, M. (2016). "Real men don't hate women": Twitter rape threats and group identity. *Journal of Pragmatics*, 91, 80–93.
- International Baccalaureate Organization. (2017). *Celebrate 50 years with us*. <https://www.ibo.org/50years#1968>
- International Baccalaureate Organization. (2019a). *Benefits of the IB*. <https://www.ibo.org/benefits/>
- International Baccalaureate Organization. (2019b). *Dr Siva Kumari interviewed on Channel NewsAsia about how the IB prepares students for their future*. <https://www.ibo.org/news/the-director-general-in-the-media/dr-siva-kumari-interviewed-on-channel-newsasia-about-how-the-ib-prepares-students-for-their-future/>
- International Baccalaureate Organization. (2019c). *Find an IB World School*. <https://www.ibo.org/programmes/find-an-ib-school/>

- International Baccalaureate Organization. (2019d). *Who we are*. <https://www.ibo.org/50years/who-we-are/>
- Karim, K. H. (2008). Press, public sphere, and pluralism: Multiculturalism debates in Canadian English-language newspapers. *Canadian Ethnic Studies*, 40(1), 57–78.
- Leggett, S. K. (2017). *The establishment and expansion of the International Baccalaureate (IB) in British Columbia, 1974–2016* [Unpublished master's thesis]. University of British Columbia.
- Lischinsky, A. (2011). In times of crisis: A corpus approach to the construction of the global financial crisis in annual reports. *Critical Discourse Studies*, 8(3), 153–168.
- Marchi, A., & Taylor, C. (2009). If on a winter's night two researchers...A challenge to assumptions of soundness of interpretation. *Critical Approaches to Discourse Analysis across Disciplines*, 3(1), 1–20.
- Mautner, G. (2008). Analyzing newspapers, magazines and other print media. In R. Wodak & M. Krzyżanowski (Eds.), *Qualitative discourse analysis in the social sciences* (pp. 30–53). Palgrave Macmillan.
- McEnery, T. (2016). Keywords. In P. Baker & J. Egbert (Eds.), *Triangulating methodological approaches in corpus-linguistic research* (pp. 20–32). Routledge.
- McEnery, T., & Baker, H. (2017). The poor in seventeenth-century England: A corpus based analysis. *Token: A Journal of English Linguistics*, 6, 51–83.
- McEnery, T., Potts, A., & Xiao, R. (2013). *London 2012 media impact study: A media research paper, investigating the impact of the Games on print media regarding disability, the reputation of the UK and perceptions of East London*. UK Government, Department for Digital, Culture, Media & Sport. <https://www.gov.uk/government/publications/london-2012-media-impact-study>
- McEnery, T., & Wilson, A. (2001). *Corpus linguistics: An introduction* (2nd ed.). Edinburgh University Press.
- Mills, S. (2004). *Discourse*. Routledge.
- Myers, G. (2004). *Matters of opinion: Talking about public issues*. Cambridge University Press.

- Peterson, A. D. C. (1987). *Schools across frontiers: The story of the International Baccalaureate and the United World Colleges*. Open Court Publishing.
- Potts, A. (2015). Filtering the flood: Semantic tagging as a method of identifying salient discourse topics in a large corpus of Hurricane Katrina reportage. In P. Baker & T. McEnery (Eds.), *Corpora and discourse studies: Integrating discourse and corpora* (pp. 285–304). Palgrave MacMillan.
- Potts, A., & Semino, E. (2017). Healthcare professionals' online use of violence metaphors for care at the end of life in the US: A corpus-based comparison with the UK. *Corpora*, 12(1), 55–84.
- Resnik, J. (2012). The denationalization of education and the expansion of the International Baccalaureate. *Comparative Education Review*, 56(2), 248–269.
- Resnik, J. (2018). All against all competition: The incorporation of the International Baccalaureate in public high schools in Canada. *Journal of Education Policy*, 1–22. <https://doi.org/10.1080/02680939.2018.1562105>
- Scott, M. (1997). PC analysis of key words – and key key words. *System*, 25(2), 233–245.
- Steiner-Khamsi, G. (2018). Businesses seeing like a state, governments calculating like a business. *International Journal of Qualitative Studies in Education*, 31(5), 382–392. <https://doi.org/10.1080/09518398.2018.1449980>
- Stubbs, M. (2010). Three concepts of keywords. In M. Bondi & M. Scott (Eds.), *Keyness in texts* (pp. 21–42). John Benjamins.
- Tarc, P., & Beatty, L. (2012). The emergence of the International Baccalaureate Diploma in Ontario: Diffusion, pilot study and prospective research. *Canadian Journal of Education*, 35(4), 341–375.
- Vessey, R. (2013). Too much French? Not enough French? The Vancouver Olympics and a very Canadian language ideological debate. *Multilingua*, 32(5), 659–682.
- Vessey, R. (2017). Representations of language education in Canadian newspapers. *The Canadian Modern Language Review*, 73(2), 158–182. <https://doi.org/10.3138/cmlr.3471>

- Willis, R. (2017). Taming the climate? Corpus analysis of politicians' speech on climate change. *Environmental Politics*, 26(2), 212–231. <https://doi.org/10.1080/09644016.2016.1274504>
- Zottola, A. (2018). Transgender identity labels in the British press: A corpus-based discourse analysis. *Journal of Language and Sexuality*, 7(2), 237–262.